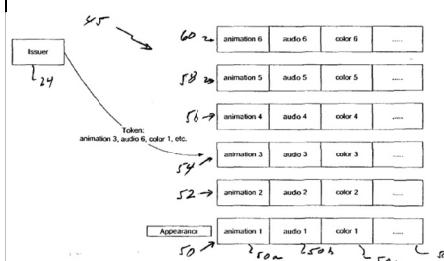


# EXHIBIT E

## Invalidity Chart for U.S. Patent No. 8,494,967

## GROUND 1 – TERRELL IN VIEW OF SAARINEN

U.S. Patent No. 8,494,967			WO 2009/141614 A1 to TERRELL	US 2005/0070257 to Saarinen	Grounds For Invalidity
Claim 1	Claim 17	Claim 18	Published November 26, 2009	Published March 31, 2005	
[a] A method by a server system for obtaining visual validation of the possession of a purchased electronic ticket on a user's computer device for presentation to a ticket taker comprising:	[a] A non-transitory computer readable data storage medium containing computer program code that when loaded and executed by a computer system causes the computer system to perform a method for obtaining visual validation of the possession of a purchased electronic ticket on a user's computer device for presentation to a ticket taker comprising the steps of:	[a] A system for obtaining visual validation of the possession of a purchased electronic ticket on a user's computer device for presentation to a ticket taker comprising one or more computers operatively connected that are configured to:	<p>“a method of electronic ticketing in which the image is displayed by a mobile device that is eye-readable for inspection purposes.” (Ex. 1010, pg. 20, ln 1-2)</p> <p>“request, from the server 101, the validation of a ticket having a specific unique ticket number... the server responds by assembling the required data, including... code for the day” (<i>Id.</i> at pp. 18, ln 29- pp. 19, ln 1).</p> <p>Moreover, <i>Terrell</i>’s electronic ticketing method includes a server that is configured to “supply ticket specific data defining a ticket to said mobile device including a ticket expiry time, such that at said mobile device: said mobile device (I) displays graphical information comprising textual information and animated graphics.” (<i>Id.</i> at p. 2, ln 24-27).</p>	<p>“A method and apparatus is provided for providing an active ticket in a mobile terminal for use by a mobile terminal user, wherein at least one active ticket has a ticket characteristic that dynamically changes based on one or more states in a life cycle of the active ticket. Dynamic changes to the ticket characteristic include multimedia changes or other presentation data, including text, sound (audio), animation, video, still pictures, or some combination thereof. The active ticket can have different states in its life cycle, such as purchased, validated, invalid for certain events.” (Abstract.)</p> <p>“Ticket verification can be conducted based on image change, sound change and/or frequency change (duration change) of the animation.” (Paragraph [0020], figure 5.)</p> <p>“six ticket appearances in an active ticket stack generally indicated as 45 of the mobile terminal 22, that includes six (6) tickets 50, 52, 54, 56, 58, 60, each having an animation section 50a, an audio section 50b, a color section 50c, as well as one or more other sections generally indicated as 50d.” (Paragraph [0084], figure 5.)</p>	<p><i>Terrell</i>’s disclosure of an “eye-readable” image on a mobile ticketing method discloses the “visual validation” recited in the ‘967 patent. In addition, <i>Terrell</i> discloses “a person such as... ticket inspector can easily, by viewing the code for the day 1107 and/or the decrementing timer 1104 observe that the ticket appears to be a valid ticket.” (<i>Id.</i> at p. 13, ln 18-20). Thus, <i>Terrell</i> also teaches that “visual validation of the possession of a purchased electronic ticket” can be obtained by “a ticket taker.”</p>  <p>Figure 5: Illustration of Ticket Appearance in an Active Ticket Stack</p> <p>“the issuer 24 provides the control data in the form of a token containing, e.g., the information “animation 3, audio 6, color 1, etc.” that determines the characteristic</p>

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## GROUND 1 – TERRELL IN VIEW OF SAARINEN

		<p>of ticket appearance 54.” (Paragraph [0085], figure 5.)</p> <p>“the ticket issuer server generates a prevalid ticket and sends a message to the ticket user terminal containing a ticket confirmation and the prevalid ticket.” (Paragraph [0116], figure 8a.)</p> <pre> sequenceDiagram     participant TIS as Ticket Issuer Server     participant TUT as Ticket User Terminal     participant TI as Ticket Inspector     TIS-&gt;&gt;TUT: ticket request     TUT-&gt;&gt;TIS: ticket.confirm &amp; prevalid.ticket     TIS-&gt;&gt;TUT: purchase request with ticket.purchase.option     TUT-&gt;&gt;TIS: valid.ticket or valid.ticket.token     TIS-&gt;&gt;TUT: upgrade ticket to valid.ticket     TUT-&gt;&gt;TIS: show or deactivate valid.ticket     TIS-&gt;&gt;TI: verify the ticket (identify the ticket and its appearance or machine check the ticket data)     TI-&gt;&gt;TIS: ticket disabled     TIS-&gt;&gt;TUT: upgrade valid.ticket to invalid.ticket or destroy valid.ticket     TUT-&gt;&gt;TIS: ticket disabled     </pre> <p>Delivery Channel: WAP, push, bluetooth, infrared with (MMS/ SMS)</p> <p>Delivery Channel: e-mail, bluetooth, infrared, SMS</p> <p>Figure 8a: Prevalid Active Ticketing Protocol.</p>	
<p>[b] receiving from the user's computer device a request to verify purchase of a previously purchased electronic ticket</p>	<p>“In addition, in place of the button 1109 (shown in Figure 11) the nonvalidated ticket of Figure 16 has a validation button 1602 allowing the user of the mobile device to request,</p>	<p>“The basic idea here is to have a driven valid ticket appearance for verification at a suitable time and location by displaying a valid ticket appearance for a limited time, then replacing it by an invalid appearance.” (Paragraph [0133], figure 3.)</p> <p>Figure 3: Ticket Samples</p> <p>Figure 3A: Buy Movie Ticket</p> <p>Figure 3B: Valid Movie Ticket</p> <p>Figure 3C: Invalid Movie Ticket</p>	<p>Terrell discloses each and every element of [b].</p>

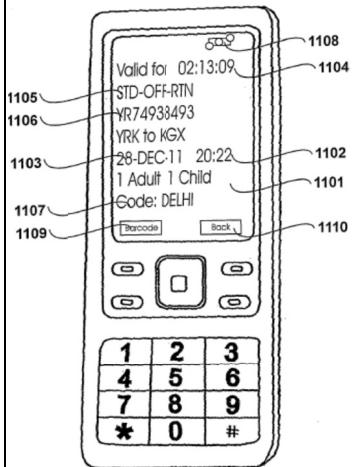
## Invalidity Chart for U.S. Patent No. 8,494,967

## GROUND 1 – TERRELL IN VIEW OF SAARINEN

<p>from the server 101, the validation of a ticket having a specified unique ticket number. Upon receiving the request the server responds by assembling the required data, including date, code for the day, "valid to" time, and generating the corresponding barcode data, as previously described. The assembled data and the barcode data are then transmitted to the requesting mobile device, so that the application can update the pre-validation ticket to a validated ticket (such as that shown in Figures 11 and 12.)" (<i>Id.</i> at pp. 18, ln 27- pp. 19, ln 5).</p> <p><i>Terrell</i> discloses a nonvalidated ticket on the mobile device(<i>Id.</i>), a request from the mobile device to the server (<i>Id.</i>), and the server responding to the request by providing to the mobile device a validated ticket that may include an "eye-readable" image (<i>Id.</i> at pg. 20, ln 1-2).</p>	<p>col 2, row 1.)</p> <pre> sequenceDiagram     participant TI as Ticket Issuer Server     participant TU as Ticket User Terminal     participant TI as Ticket Inspector (machine or person)     TI-&gt;&gt;TU: ticket.request     TU-&gt;&gt;TI: ticket.confirms &amp; ticket     TI-&gt;&gt;TU: show with prevalid appearance     TU-&gt;&gt;TI: ticket.active.request     TI-&gt;&gt;TU: cross check payment status, generate bill and corresponding control token     TU-&gt;&gt;TI: ticket.control.token     TI-&gt;&gt;TU: show correct ticket appearance according to the token     TU-&gt;&gt;TI: purchase.request with filled purchase option     TI-&gt;&gt;TU: if ticket has not paid     TU-&gt;&gt;TI: show or beam/send valid.ticket if ticket has been paid     TI-&gt;&gt;TU: ticket disabler     TU-&gt;&gt;TI: if ticket is used     TI-&gt;&gt;TU: valid ticket to invalid ticket or valid ticket here     TU-&gt;&gt;TI: Delivery Channel: WAP push, Bluetooth, Infrared with (MMS/ SMS)     TI-&gt;&gt;TU: verify pre ticket (identify the ticket into via its association or matching check on the ticket data)   </pre> <p>Figure 8b: Active Ticketing Protocol with Cross Check</p> <p>"the mobile terminal provides a request for an active ticket application to the ticket service provider. By way of example, the request is shown to have mobile information device (MID) data and the ticket service provider is an application ticket service provider. In response, the ticket service provider generates an application active ticket with pre-valid event ticket sessions." (Paragraph [0088], figure 6.)</p>	<pre> sequenceDiagram     participant MT as Mobile terminal     participant MTS as MIDlet ticket service provider     MT-&gt;&gt;MTS: request for active ticket application (with MID data)     MTS-&gt;&gt;MT: generate MIDlet active ticket with pre-valid event ticket sessions     MT-&gt;&gt;MTS: download ticket suite     MTS-&gt;&gt;MT: verify payment/upgrade ticket status     MT-&gt;&gt;MTS: user starts and browses the active ticket application     MTS-&gt;&gt;MT: verify payment/upgrade ticket status     MT-&gt;&gt;MTS: request valid ticket media / payment, time, location (with MID data)     MTS-&gt;&gt;MT: verify appearance     MT-&gt;&gt;MTS: valid appearance command (or valid set of media)     MTS-&gt;&gt;MT: upgrade ticket status     MT-&gt;&gt;MTS: use valid ticket     MTS-&gt;&gt;MT: upgrade ticket status     MT-&gt;&gt;MTS: push cancel command (or invalid ticket media) to specified MID with new pre-ticket sessions     MTS-&gt;&gt;MT: request valid ticket media / payment, time, location (with MID data)     MT-&gt;&gt;MTS: upgrade/ show     MTS-&gt;&gt;MT: upgrade/ show     MT-&gt;&gt;MTS: upgrade/ show     MTS-&gt;&gt;MT: upgrade/ show   </pre> <p>Figure 6: Active Ticketing Protocol</p> <p>"payment status" (figure 8b, column 1, row 2) is before "show correct ticket appearance according to the token" (figure 8b, column 3, row 4).</p> <p>"In response, the ticket service provider verifies payment, upgrades the ticket status and provides a valid appearance command (or valid set of media) to the mobile terminal." (Paragraph [0088], figure 6.)</p> <p>"the ticket issuer server crosschecks the payment status, generates a bill and corresponding control token and sends to the ticket user terminal a message containing the ticket control</p>
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## GROUND 1 – TERRELL IN VIEW OF SAARINEN

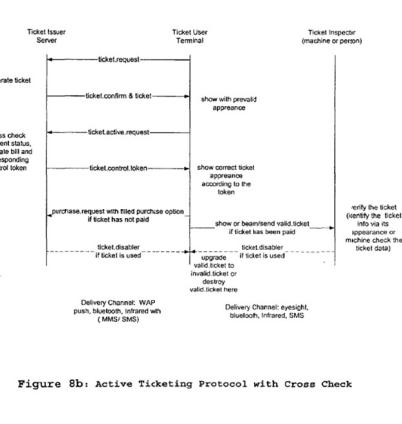
		token.” (Paragraph [0123], figure 8b.)	
[c] and to obtain a visual validation display object that confirms that the user possesses the previously purchased electronic ticket	<p>“request, from the server 101, the validation of a ticket having a specific unique ticket number... the server responds by assembling the required data, including... code for the day” (<i>Id.</i> at pp. 18, ln 29- pp. 19, ln 1).</p> <p><i>Terrell</i> further discloses the validated ticket may include “a non-text graphic 1108, which may be a logo of the service provider. Such a graphic may also be animated, providing further complexity to the ticket, to prevent fraudulent copying.” (<i>Id.</i> at pg. 13, ln 21-23, Figure 11).</p> 	<p>“Ticket verification can be conducted based on image change, sound change and/or frequency change (duration change) of the animation.” (Paragraph [0020], figure 5.)</p> <p>“the ticket service provider generates an application active ticket with pre-valid event ticket sessions and downloads one or more ticket suites to the mobile terminal.” (Paragraph [0088], figure 8b.)</p> <p>payment status” (figure 8b, column 1, row 2) is before “show correct ticket appearance according to the token” (figure 8b, column 3, row 4).</p> <p>“Upon receiving the message, the active ticket in the ticket user terminal will change some characteristic, like appearance, according to the payment confirmation.” (Paragraph [0132], figure 5.)</p>	<i>Terrell</i> discloses each and every element of [d].

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	that is to be presented as human-readable information on the mobile device display.” ( <i>Id.</i> at pg. 9, ln 19-20).		
[d] for utilization of a service monitored by the ticket taker	<p><i>Terrell</i> discloses this recitation wherein it discloses the mobile electronic ticket is “[f]or the purposes of speed and economy, at times it may preferable for such a ticket inspection to be merely done by the inspector’s eyes.” (<i>Id.</i> at pg. 4, ln 16-17).</p> <p><i>Terrell</i> discloses that tickets “provided by a wireless application server to mobile devices” will be shown “to the bus driver, and possibly a ticket inspector who boards the bus for the purpose of checking and validating tickets.” (<i>Id.</i> at pg. 4, ln 5-6, ln 14-16).</p>	<p>Just by viewing and/or listening to the active ticket, the redemption inspector can verify if the ticket is valid.” (Paragraph [0029], figures 3 and 5.)</p> <p>“In order to use the active ticket, the user of the ticket user terminal either shows or beams the valid ticket to a ticket inspector, who verifies the active ticket by identifying the ticket information via its characteristic (e.g. appearance) or a machine may check the ticket data.” (Paragraph [0116], figures 3 and 5.)</p>	<i>Terrell</i> discloses each and every element of [d].
[e] the visual validation display object configured to be readily recognizable visually by the ticket taker	<p><i>Terrell</i> discloses mobile ticketing that “[f]or the purposes of speed and economy, at times it may preferable for such a ticket inspection to be merely done by the inspector’s eyes.” (<i>Id.</i> at pg. 4, ln 16-17).</p> <p>Moreover, <i>Terrell</i> discloses “[T]he graphical information part comprises data that is to be presented as human-readable information on the mobile device display.” (<i>Id.</i> at pg. 9, ln 19-20). <i>Terrell</i> discloses the validated ticket may include “a non-text graphic 1108, which may be a logo of the service provider. Such a graphic may also be animated, providing further complexity to the ticket, to prevent fraudulent copying.” (<i>Id.</i> at pg. 13, ln 21-23, Figure 11).</p>	<p>“Ticket verification can be conducted based on image change, sound change and/or frequency change (duration change) of the animation.” (Paragraph [0020], figure 5.)</p> <p>“Upon receiving the message, the ticket in the ticket user terminal will be upgraded to a valid ticket then back to the previous appearance after a limited time.” (Paragraph [0132], figure 3.)</p>	<i>Terrell</i> discloses each and every element of [e].

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[f] receiving from the user's computer device a token associated with the received request	<p><i>Terrell</i> discloses this wherein it describes “the mobile device to request, from the server 101, the validation of a ticket having a specific unique ticket number.” (<i>Id.</i> at pg. 18, ln 29-30). <i>Terrell</i> further teaches that “[T]he tickets supplied by the server 101 to the mobile devices such as device 102 each comprise a unique ticket number.” (<i>Id.</i> at pg. 5, ln 1-4). Thus, <i>Terrell</i>’s disclosure of the mobile device seeking validation from the server of a “unique ticket number” would be understood by a person skilled in the art as being identical to a “token.”</p> <p><i>Terrell</i> discusses “allowing the user of the mobile device to request, from the server 101, the validation of the ticket having a specified unique ticket number.” (<i>Id.</i> at pg. 5, ln 1-4). Furthermore, <i>Terrell</i> suggests that “[D]etails of the tickets sold, including unique ticket number, are stored in the verification database.” (<i>Id.</i> at pg. 5, ln 3-5).</p>	<p>“request valid ticket media / payment, time, location (with MID data).” (Figure 6, col 3, row 3.)</p> <p>“the request is shown to have mobile information device (MID) data.” (Paragraph [0088], figure 8b.)</p> <p>“ticket.active.request” (Figure 8b, col 2, row 2.)</p>  <p>Figure 8b: Active Ticketing Protocol with Cross Check</p>	<p><i>Terrell</i> does not specifically utilize the term “token” when discussing communications between the user’s computer device and the server system. The Patent Owner (“Bytemark”) has asserted in litigation with a third party (Civil Action No. 2:16-cv-00543-JRG-RSP in the Eastern District of Texas – Marshall Division – Bytemark vs. Masabi) that <i>Terrell</i> does not teach the use of tokens as claimed in the ‘967 patent.</p> <p><i>Saarinen</i> discloses “the ticket issuer server crosschecks the payment status, generates a bill and corresponding control token and sends to the ticket user terminal a message containing the ticket control token.” (Ex. 1011, Paragraph [0123], figure 8b.) <i>Saarinen</i> further discloses the use of MID data transmitted during communications as a method of verifying ownership: “the request is</p>
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**Invalidity Chart for U.S. Patent No. 8,494,967****GROUND 1 – TERRELL IN VIEW OF SAARINEN**

			<p>shown to have mobile information device (MID) data.” (Paragraph [0088], figure 8b.)</p> <p>One skilled in the art would understand that the communication of MID data as taught by <i>Saarinen</i> would comprise a token as recited in claims 1 17 and 18 of the ‘967 patent.</p> <p>Furthermore, it would be obvious for one skilled in the art to use tokens, as taught by <i>Saarinen</i>, in place of the information transmission of <i>Terrell</i> as it provides additional security.</p> <p>Element [f] is obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>
<p>[g] determining whether a token associated with the purchased electronic ticket has been stored in a data record associated with the received request, and if it has, whether the received token is valid</p>	<p><i>Terrell</i> provides that “a token associated with the purchased electronic ticket has been stored in a data record” wherein it teaches that “[D]etails of the tickets sold, including the unique ticket number are stored in the verification database.” (<i>Id.</i> at p. 5, ln 3-4). Furthermore, <i>Terrell</i> discloses “determining whether a token associated with the purchased electronic ticket has been stored in a data record” and “whether</p>	<p>“In response, the ticket service provider verifies payment, upgrades the ticket status and provides a valid appearance command (or valid set of media) to the mobile terminal.” (Paragraph [0088], figure 6.)</p> <p>“the ticket issuer server crosschecks the payment status, generates a bill and corresponding control token and sends to the ticket user terminal a message containing the ticket control token.” (Paragraph [0123], figure 8b.)</p>	<p><i>Terrell</i> does not specifically utilize the term “token” when discussing communication s between the user’s computer device and the server system. The Patent Owner (“Bytemark”) has asserted in litigation with a third party (Civil Action No. 2:16-cv-00543-JRG-RSP in the</p>

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## GROUND 1 – TERRELL IN VIEW OF SAARINEN

			<p>and 18 of the ‘967 patent. Furthermore, it would be obvious for one skilled in the art to use tokens, as taught by <i>Saarinen</i>, in place of the information transmission of <i>Terrell</i> as it provides additional security.</p> <p>Element [g] is obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>
<p>[h] in dependence on the determination that the received token is valid, causing an activation of the purchased electronic ticket</p>	<p><i>Terrell</i> discloses validating a specific unique ticket number (token) and in response replacing a nonvalidated ticket on a mobile phone with a validated ticket:</p> <p>“In addition, in place of the button 1109 (shown in Figure 11) the nonvalidated ticket of Figure 16 has a validation button 1602 allowing the user of the mobile device to request, from the server 101, the validation of a ticket having a specified unique ticket number. Upon receiving the request the server responds by assembling the required data, including date, code for the day, “valid to” time, and generating the corresponding barcode data, as previously described. The assembled data and the barcode data are then transmitted to the requesting mobile device, so that the application can update the pre-validation ticket to a validated ticket (such as that</p>	<p>“The ticket issuer can control the dynamic characteristic or appearance change remotely by providing a control token to the mobile terminal. The token sending may be uniquely based on the International Mobile Equipment Identification (IMEI) code, or other terminal or subscriber identification, even an IP address.” (Paragraph [0049], figure 5.)</p> <p>“At an appropriate time or place, the mobile terminal provides a use valid ticket request to the ticket service provider. In response, the ticket service provider verifies the appearance of the active ticket, upgrades the ticket status, and provides a push cancel command (or invalid ticket media to the specified MID) to specified MID with new pre-ticket sessions, which ends the ticket life cycle.” (Paragraph [0088], figure 6.)</p> <p>“show correct ticket appearance according to the token” (column 3, row 4) in response to “ticket.control.token” (Figure 8b, column 1, row 4).</p>	<p><i>Terrell</i> does not specifically utilize the term “token” when discussing communication s between the user’s computer device and the server system. The Patent Owner (“Bytemark”) has asserted in litigation with a third party (Civil Action No. 2:16-cv-00543-JRG-RSP in the Eastern District of Texas – Marshall Division – Bytemark vs. Masabi) that <i>Terrell</i> does not teach the use of tokens as claimed in the ‘967 patent.</p> <p><i>Saarinen</i> discloses “the ticket issuer server crosschecks the payment status, generates a bill and corresponding</p>

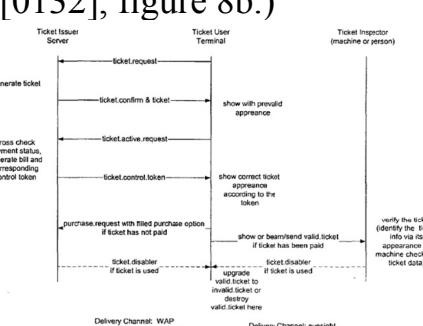
## Invalidity Chart for U.S. Patent No. 8,494,967

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	<p>shown in Figures 11 and 12.” (<i>Id.</i> at pp. 18, ln 27- pp. 19, ln 5).</p> <p>The validated ticket may include an animated image (<i>Id.</i> at pg. 13, ln 21-23, Figure 11). <i>Terrell</i>, therefore, discloses activation of a purchased electronic ticket upon validation of the unique ticket number.</p>	<p>“Upon receiving the message, the active ticket in the ticket user terminal will change some characteristic, like appearance, according to the payment confirmation. At a suitable time and location, the ticket issuer server sends to the ticket user terminal a ticket control token. Upon receiving the message, the ticket in the ticket user terminal will be upgraded to a valid ticket then back to the previous appearance after a limited time.” (Paragraph [0132], figure 8b.)</p> <p>“Upon receiving the message, the ticket user terminal may upgrade the prevalid ticket to a valid ticket.” (Paragraph [0116], figures 3A-C and 8a.)</p>	<p>control token and sends to the ticket user terminal a message containing the ticket control token.” (Ex. 1011, Paragraph [0123], figure 8b.) <i>Saarinen</i> further discloses the use of MID data transmitted during communication s as a method of verifying ownership: “the request is shown to have mobile information device (MID) data.” (Paragraph [0088], figure 8b.)</p> <p>One skilled in the art would understand that the communication of MID data as taught by <i>Saarinen</i> would comprise a token as recited in claims 1 17 and 18 of the ‘967 patent.</p> <p>Furthermore, it would be obvious for one skilled in the art to use tokens, as taught by <i>Saarinen</i>, in place of the information transmission of <i>Terrell</i> as it provides additional security.</p> <p>Element [h] is obvious over</p>
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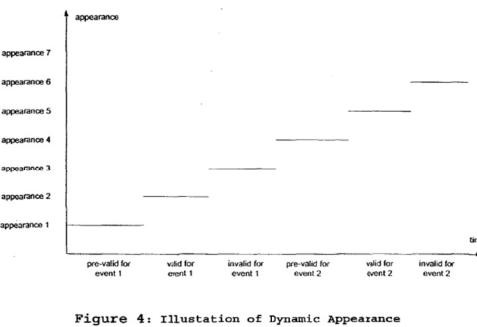
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## GROUND 1 – TERRELL IN VIEW OF SAARINEN

			<i>Terrell in view of Saarinen.</i>
[i] by transmitting to the user's computer device a data file comprising the visual validation display object	<p><i>Terrell</i> discloses after validation of the specified unique ticket number, having the server assemble the ticket data, including an animated graphic, and send to the mobile device. (<i>Id.</i> at pp. 18, ln 27-pp. 19, ln 5).</p> <p><i>Terrell</i> teaches that “receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated.” (<i>Id.</i> at pp. 20, ln 5-7).</p>	<p>“the ticket issuer server generates a prevalid ticket and sends a message to the ticket user terminal containing a ticket confirmation and the prevalid ticket.” (Paragraph [0116], figure 8a)</p> <p>“At a suitable time and location, the ticket issuer server sends to the ticket user terminal a ticket control token.” (Paragraph [0132], figure 8b.)</p> 	<i>Terrell</i> discloses the recitations of element [i].
[j] that causes upon visual recognition by the ticket taker, the user to be permitted to utilize the service monitored by the ticket taker.	<p><i>Terrell</i> discloses the validated ticket sent to the mobile phone may include a visually validating element “[f]or the purposes of speed and economy, at times it may preferable for such a ticket inspection to be merely done by the inspector’s eyes.” (<i>Id.</i> at pg. 4, ln 16-17)</p> <p>More specifically, <i>Terrell</i> provides “a person such as a railway guard, a bus driver or ticket inspector can easily, by viewing the code for the day 1107 and/or the decrementing timer 1104 observe that the ticket appears to be valid ticket. In addition, the ticket also includes a non-text graphic 1108, which may be a logo of the service provider. Such a graphic may also be animated, providing further complexity to the ticket, to prevent</p>	<p>“In order to use the active ticket, the user of the ticket user terminal either shows or beams the valid ticket to a ticket inspector, who verifies the active ticket by identifying the ticket information via its characteristic (e.g. appearance) or a machine may check the ticket data.” (Paragraph [0116], figure 8a)</p>	<i>Terrell</i> discloses the recitations of element [j].

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	fraudulent copying.” ( <i>Id.</i> at pg. 13, ln 18-23).		
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<b>U.S. Patent No. 8,494,967</b>	<b>WO 2009/141614 A1 to TERRELL</b>	<b>US 2005/0070257 to Saarinen</b>	<b>Grounds For Invalidity</b>
<b>Claim 3</b>	<b>Claim 20</b>	<b>Published November 26, 2009</b>	<b>Published March 31, 2005</b>
[a] The method of claim 1 further comprising:  storing in the data record associated with the purchased electronic ticket a data value representing a predetermined lock time;	<p><i>Terrell</i> discloses this recitation wherein it teaches the graphical information part 702 of the ticket data 701 as including “a “valid to” time (an expiry time for the validation of the ticket.” (Ex. 1010, pg. 9, ln 23-24).</p> <p>In addition, <i>Terrell</i> discloses that the ticket information is stored on the server: “Details of the tickets sold, including the unique ticket number, are stored in the verification database.” (<i>Id.</i> at pg. 5, ln 3-4)</p> <p>Finally, <i>Terrell</i> discloses: “According to a second aspect of the present invention, there is provided an apparatus for electronic ticketing, comprising, a wireless application server and a database, wherein said wireless application server is configured to: retrieve booking information from said database to facilitate the booking of an event; <u>write details of an event to said database</u> in response to a purchase made by a customer using a mobile device having a viewable screen; and supply ticket specific data defining a ticket to said mobile device <u>including a ticket expiry time</u>, such that at said mobile device: said mobile device (i) displays graphical information comprising textual information and</p>	<p>“The active ticket is dynamic during its lifetime and better yet, new control data can be sent to it to change the algorithm, give the algorithm new parameter values or change other presentation data. This control data is a part of the active ticket but is received for example at a certain time and/or location, or just before the ticket is about to be used.” (Para [0019].)</p> <p>“The multimedia feature of the active ticket shows the ticket information and other information by video, audio, animation or some combination thereof. The active ticket is dynamic, which contains an algorithm to change its appearance when some event happens (e.g. when expiration time comes, when ticket has been used, etc.).” (Para [0023].)</p>  <p>Figure 4: Illustration of Dynamic Appearance of an Active Ticket</p>	<p><i>Terrell</i> discloses elements [a-c] of claims 3 and 20 of the ‘967 patent and therefore claims 3 and 20 are obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>

**Invalidity Chart for U.S. Patent No. 8,494,967****GROUND 1 – TERRELL IN VIEW OF SAARINEN**

	<p>animated graphics.” (<i>Id.</i> at pg. 2, ln 18-27)</p> <p>A person of skill in the art would understand from <i>Terrell</i> that the electronic tickets include information related to expiration that is stored in the data record of the server.</p>		
<p>[b] determining whether a duration of time from the transmission of the visual validation display object to the predetermined lock time has expired; and</p>	<p><i>Terrell</i> further discloses “[i]t will be understood that as the graphical information is displayed at step 902 the steps 1001 and 1002 are repeatedly performed resulting in the “valid for” time being a decrementing timer.” (<i>Id.</i> at pg. 12, ln 1-5).</p> <p>One skilled in the art would understand from <i>Terrell</i> that an electronic ticket and an associated visual validation display object may be tied to a predetermined time of activity that could be controlled by either the server or the mobile device. The decrementing visual indication of validity time period in <i>Terrell</i> discloses the recitations of section [b].</p>	<p>“The multimedia feature of the active ticket shows the ticket information and other information by video, audio, animation or some combination thereof. The active ticket is dynamic, which contains an algorithm to change its appearance when some event happens (e.g. when expiration time comes, when ticket has been used, etc.).” (Para [0023].)</p>	<p><i>Terrell</i> discloses elements [a-c] of claims 3 and 20 of the ‘967 patent and therefore claims 3 and 20 are obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>
<p>[C] in dependence on such determination, permitting or not permitting the visual validation display object to be transmitted to the user's computer device</p>	<p><i>Terrell</i> discloses “[i]t will be understood that as the graphical information is displayed at step 902 the steps 1001 and 1002 are repeatedly performed resulting in the “valid for” time being a decrementing timer.” (<i>Id.</i> at pg. 12, ln 3-5).</p> <p>The decrementing visual indication of validity time period in <i>Terrell</i> discloses a time restricted control over the visual validation display on the mobile device. A person skilled in the art would understand from <i>Terrell</i> that a time restriction may be placed on activation or transmission of the</p>	<p>“The multimedia feature of the active ticket shows the ticket information and other information by video, audio, animation or some combination thereof. The active ticket is dynamic, which contains an algorithm to change its appearance when some event happens (e.g. when expiration time comes, when ticket has been used, etc.).” (Para [0023].)</p>	<p><i>Terrell</i> discloses elements [a-c] of claims 3 and 20 of the ‘967 patent and therefore claims 3 and 20 are obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>

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	electronic ticket as the temporal restrictions in the recitations of section [c] are clearly encompassed in the <i>Terrell</i> disclosure.		
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<b>U.S. Patent No. 8,494,967</b>	<b>WO 2009/141614 A1 to TERRELL</b>	<b>US 2005/0070257 to Saarinen</b>	<b>Grounds for Invalidity</b>
<b>Claim 4</b>	<b>Claim 21</b>	<b>Published November 26, 2009</b>	<b>Published March 31, 2005</b>
[a] The method of claim 1 further comprising: transmitting an authorization key to the user's computer device that transmitted the received request.	<p><i>Terrell</i> discloses “Consequently, at step 302 the mobile device 102 receives the application, along with a public encryption key that is for subsequent asymmetric encryption.” (Ex. 1010, pg. 6, ln 7-9).</p> <p><i>Terrell</i> further discloses that the “graphical information” may include both “graphics to be animated” as well as “machine-readable code defining at least a unique ticket number and a means of authentication.” (<i>Id.</i> at pg. 2, ln 12-13).</p> <p>The ‘967 patent does not disclose any detailed description of encryption technology but rather relies on existing technologies and methodologies. A person skilled in the art would recognize that the encryption methodologies as disclosed in <i>Terrell</i> encompasses the “authorization key” as recited in claims 4 and 21.</p>	<p>“the MeT ticket may be used to support an encrypted part. In this security scheme, the keys for the ticket encrypted part can be delivered to the application after the application has given its unique key or number (created at installation) and the payment. The server then encrypts part of the ticket so that only this installed application can open it; or alternative key solutions can be used. The user is now holder of a payed ticket and it shows in the appearance of the ticket. The idea of the active ticket is that just downloading the application and a copied ticket does not make you a valid ticket holder. Before the use of the ticket, a key or command is broadcast or pushed to the terminal to indicate a valid status.” (Para [0049]-[0050].)</p> <p>“1. The ticket issuer generates a root key, which can derive a number of seed keys. [0099] 2. Distribute the seed keys to the users before issuing the ticket. [0100] 3. Broadcast the command encryption by the root key and indicate which seed keys can be used for decryption based on the data managed by the ticket provider. [0101] 4. Only the user who is holding the valid seed keys (which are allowed to decrypt the command package) can decrypt the command package and upgrade the ticket appearance to the</p>	<p><i>Terrell</i> discloses element [a] of claims 4 and 21 of the ‘967 patent and therefore claims 4 and 21 are obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>

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		valid one.” (Para [0098]-[0101].)	
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<b>Claim 5</b>	<b>Claim 22</b>	<b>Published November 26, 2009</b>	<b>Published March 31, 2005</b>
[a] The method of claim 4 further comprising: encrypting the visual validation display object using the authorization key.	<p><i>Terrell</i> discloses the ticket data being “digitally signed using a private authentication key of an asymmetric (public) key pair.” (Ex. 1010, pg. 10, ln 4-5).</p> <p><i>Terrell</i> further discloses the validated ticket sent to the mobile phone may include a visually validating element “[f]or the purposes of speed and economy, at times it may preferable for such a ticket inspection to be merely done by the inspector’s eyes.” (<i>Id.</i> at pg. 4, ln 16-17)</p> <p>Finally, <i>Terrell</i> discloses “The step 803 of displaying a ticket is further detailed in Figure 9. Initially, the graphical information part of the ticket data 702 that was <u>decrypted</u> at step 605 is retrieved at step 901. ... Specifically, the application requires at least one graphic element to be <u>animated</u>.” (<i>Id.</i> at pg. 10, ln 19-27)</p> <p>It would be clear to a person of skill in the art that <i>Terrell</i> discloses graphical ticket information that includes an animated element that is encrypted by the server and decrypted by the mobile device. The ‘967 patent does not disclose any detailed description of encryption technology but rather relies on existing technologies and methodologies. A person skilled in the art would recognize that the encryption methodologies as disclosed in <i>Terrell</i> encompasses the encryption of the transmitted ticket data, which may include visual validation, using a</p>	<p>“the MeT ticket may be used to support an encrypted part. In this security scheme, the keys for the ticket encrypted part can be delivered to the application after the application has given its unique key or number (created at installation) and the payment. The server then encrypts part of the ticket so that only this installed application can open it; or alternative key solutions can be used. The user is now holder of a payed ticket and it shows in the appearance of the ticket. The idea of the active ticket is that just downloading the application and a copied ticket does not make you a valid ticket holder. Before the use of the ticket, a key or command is broadcast or pushed to the terminal to indicate a valid status.” (Para [0049]-[0050].)</p> <p>“1. The ticket issuer generates a root key, which can derive a number of seed keys. [0099] 2. Distribute the seed keys to the users before issuing the ticket. [0100] 3. Broadcast the command encryption by the root key and indicate which seed keys can be used for decryption based on the data managed by the ticket provider. [0101] 4. Only the user who is holding the valid seed keys (which are allowed to decrypt the command package) can decrypt the command package and upgrade the ticket appearance to the valid one.” (Para [0098]-[0101].)</p>	<i>Terrell</i> discloses element [a] of claims 5 and 22 of the ‘967 patent and therefore claims 5 and 22 are obvious over <i>Terrell</i> in view of <i>Saarinen</i> .

**Invalidity Chart for U.S. Patent No. 8,494,967****GROUND 1 – TERRELL IN VIEW OF SAARINEN**

	private and public key pair as recited in claims 5 and 22.		
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<b>Claim 6</b>	<b>Claim 23</b>	<b>Published November 26, 2009</b>	<b>Published March 31, 2005</b>	
[a] The method of claim 4 further comprising: encrypting the visual validation display object with a public key of a public/private key pair for which the transmitted authorization key is an associated private key.	<p><i>Terrell</i> discloses the ticket data being “digitally signed using a private authentication key of an asymmetric (public) key pair.” (Ex. 1010, pg. 10, ln 4-5).</p> <p><i>Terrell</i> further discloses the validated ticket sent to the mobile phone may include a visually validating element “[f]or the purposes of speed and economy, at times it may preferable for such a ticket inspection to be merely done by the inspector’s eyes.” (<i>Id.</i> at pg. 4, ln 16-17)</p> <p>The ‘967 patent does not disclose any detailed description of encryption technology but rather relies on existing technologies and methodologies. A person skilled in the art would recognize that the encryption methodologies as disclosed in <i>Terrell</i> encompasses the encryption of the transmitted ticket data, which may include visual validation, using a private and public key pair as recited in claims 6 and 23.</p>	<p>“the MeT ticket may be used to support an encrypted part. In this security scheme, the keys for the ticket encrypted part can be delivered to the application after the application has given its unique key or number (created at installation) and the payment. The server then encrypts part of the ticket so that only this installed application can open it; or alternative key solutions can be used. The user is now holder of a payed ticket and it shows in the appearance of the ticket. The idea of the active ticket is that just downloading the application and a copied ticket does not make you a valid ticket holder. Before the use of the ticket, a key or command is broadcast or pushed to the terminal to indicate a valid status.” (Para [0049]-[0050].)</p> <p>“1. The ticket issuer generates a root key, which can derive a number of seed keys. [0099] 2. Distribute the seed keys to the users before issuing the ticket. [0100] 3. Broadcast the command encryption by the root key and indicate which seed keys can be used for decryption based on the data managed by the ticket provider. [0101] 4. Only the user who is holding the valid seed keys (which are allowed to decrypt the command package) can decrypt the command package and upgrade the ticket appearance to the valid one.” (Para [0098]-[0101].)</p>	<p><i>Terrell</i> discloses element [a] of claims 6 and 23 of the ‘967 patent and therefore claims 6 and 23 are obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>	

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<b>U.S. Patent No. 8,494,967</b>	<b>WO 2009/141614 A1 to TERRELL,</b>	<b>US 2005/0070257 to Saarinen</b>	<b>Grounds for Invalidity</b>
<b>Claim 34</b>	<b>Published November 26, 2009</b>	<b>Published March 31, 2005</b>	
[a] The system of claim 18 where the visual validation display object is an animation that operates in reaction to a touch of the user's computer device screen.	<p><i>Terrell</i> discloses the mobile device having a validation button 1602 that serves to retrieve the validation display object (<i>Id.</i> at pg. 18, ln 27- pg. 19, ln 5)</p> <p>In addition, <i>Terrell</i> discloses that this validation display object may include "graphics to be animated" (<i>Id.</i> at claim 1, pg. 20).</p> <p>It would be clear to a person of skill in the art that pressing the validation button to retrieve the "graphics to be animated", as disclosed in <i>Terrell</i>, would read on the "visual validation display object is an animation that operates in reaction to a touch of the user's computer device screen" as recited in claim 34.</p>	<p>"The invalid movie ticket includes a first text section 44a indicating the text "Invalid Movie Ticket", an image section 44b showing a scene from a movie, a second text section 44c indicating the text "For more movie, press menu", and a third section generally indicated as 44d having icons "Active/pay" or "Exit" for the user to click on to display the menu of movies to purchase tickets for or to exit the display." (Para [0078]; figures 3A-C.)</p> <p>"the ticket service provider verifies the appearance of the active ticket, upgrades the ticket status, and provides a push cancel command (or invalid ticket media to the specified MID) to specified MID with new pre-ticket sessions, which ends the ticket life cycle." (Para [0088].)</p> <p>"The user may place the mobile terminal again to the ticketing reader and press "use ticket". (Para [0164].)</p>	<p><i>Terrell</i> discloses element [a] of claim 34 of the '967 patent and therefore claim 34 is obvious over <i>Terrell</i> in view of <i>Saarinen</i>.</p>

